

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An electric motor-driven power steering apparatus comprising:

a steering system;

a bridge circuit;

a power source for connecting between input terminals of the bridge circuit; and

an electric motor for connecting between output terminals of the bridge circuit, wherein:

the bridge circuit energizes the electric motor and operates electric motor power to the steering system; and

the bridge circuit includes ~~predetermined number~~ a plurality of arms, each of said plurality of arms having a connecting circuit for connecting circuit and a pair of switching elements in parallel with diodes, said connecting circuit connecting in series the pair of switching elements in parallel with diodes, in series so that the diodes mutually become having reverse polarity with respect to one another.

2. (currently amended) The electric motor-driven power steering apparatus according to claim 1, wherein:

the electric motor is a DC motor;

~~the bridge circuit includes said plurality of arms include~~ four arms, and ON driving of one of ~~the opposite arms of said four arms~~ is performed;

PWM driving of ~~the another~~ of the opposite arms is performed; and

~~each of the opposite arms in which the ON driving is performed~~ includes a connecting circuit and a pair of switching elements in parallel with diodes, said connecting circuit connects in series the pair of switching elements in parallel with diodes, the diodes having reverse polarity with respect to one another ~~for connecting switching elements in parallel with diodes in series so that the diodes mutually become reverse polarity.~~

3. (currently amended): The electric motor-driven power steering apparatus according to claim 1, wherein

the electric motor is a DC motor and ~~the bridge circuit includes said plurality of arms include~~ four arms, and ~~all~~ each of the four arms includes a connecting circuit and a pair of switching elements in parallel with diodes, said connecting circuit connects in series the pair of switching elements in parallel with diodes, the diodes having reverse polarity with respect to one another ~~include connecting circuits for connecting switching elements in parallel with diodes in series so that the diodes mutually become reverse polarity.~~

4. (currently amended): The electric motor-driven power steering apparatus according to claim 1, wherein

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the electric motor is a three-phase motor and ~~the bridge circuit includes~~said plurality of
arms include six arms, and each of the six arms includes a connecting circuit and a pair of
switching elements in parallel with diodes, said connecting circuit connects in series the pair of
switching elements in parallel with diodes, the diodes having reverse polarity with respect to one
another~~all the arms include connecting circuits for connecting switching elements in parallel with~~
~~diodes in series so that the diodes mutually become reverse polarity.~~

5. (currently amended): The electric motor-driven power steering apparatus according to
claim 1, further comprising

~~an~~a capacitor for noise elimination, wherein

at least one end of the capacitor is connected to a connection point for connecting said
connection circuit~~circuits for connecting switching elements in parallel with diodes in series so~~
~~that the diodes mutually become reverse polarity.~~

6. (currently amended): The electric motor-driven power steering apparatus according to
claim 1, wherein

the switching elements are ~~is a~~ field-effect transistors and the diodes connected in
parallel ~~is a~~are parasitic diodes of the field-effect transistors.